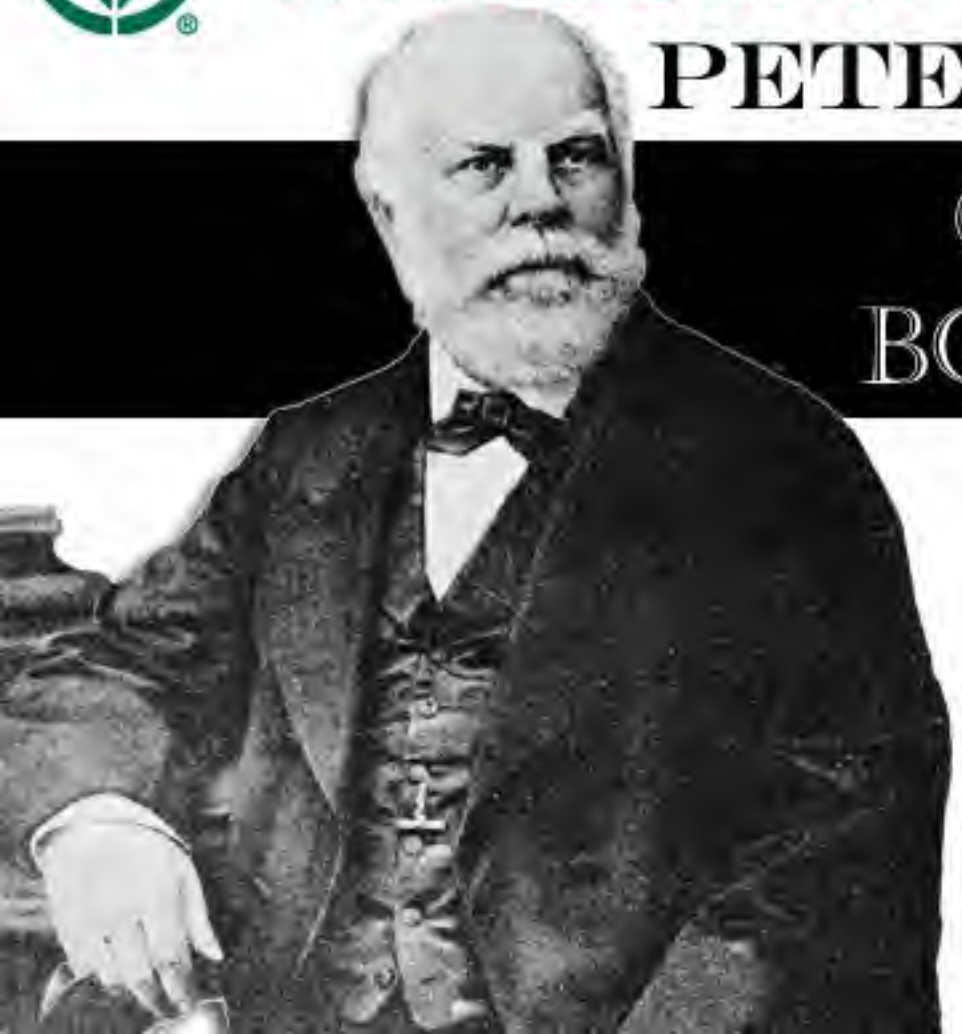
Missouri Botanical Garden
Peter H. Raven Library

George Engelmann Botanical Notebooks



Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

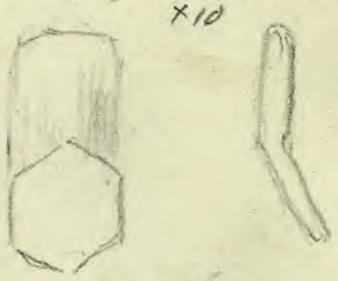
Phyllospadix

Nov 22 1879

Santa Cruz, Aug 79
Miss Sennebeker

fruits x 2
dorsal view

plumule
x10



lateral view
of fruit x 2

fruit
x 4

embryo

after removing
part of fruit coating
upper part firmly adhering to seed
lower part easily detached, seed free and shining

lateral

dorsal

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Ledlie & Glover
APOTHECARIES.
No. 2600 Eaclede Ave. S. W. Cor. Jefferson Ave.
ST. LOUIS, MO.

10159B

10159A

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

Ledlie & Glover
APOTHECARIES.
S. W. Cor. Jefferson Ave.
ST. LOUIS, MO.

Herb Gray Cambridge Octob 1856

Alisma Plantago N York.

sepals rounded, mucronate;

ovaries very numerous, 2 carinate as the fruit is

style ventral, below the top; filiform, stigma capitellate?

Alisma subulata Lin?

sepals obtuse

not mucronate

ovaries in a single

circle, tricarinate

with a ~~filiform~~ style

~~subulate~~ short

hooked style nearly

at top.

Sann in Herb. Torrey

Such mem by A. subulata: Sagittaria

pusilla, or he may compound both

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

10160

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Alisma in Herb. Generale, Paris 1857

A. dentellum Mart. Brasil very near apparently my Echinodorus parvulus

A. intermedium Mart Brasil

A. subalatum Mart Brasil

A ephemerum Spreng Brasil the very smallest

A pubescens Mart "

A ranunculoides Europe

A Plantago " "

A parnassifolium Berlin

A natans Europe

A repens Cav. Egypt (habit of A. Echinodorus pusillus

10161

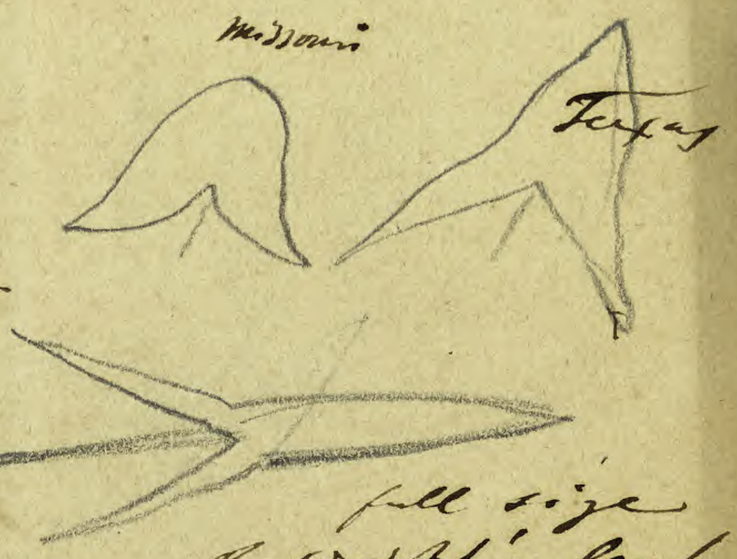
MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

Alismaceæ Hb Hook 2. Aug 1857

Sagittaria natans N Carolina, Hook
a specimen with linear phyllodia

Sag. calycina Missouri Engelm
San Felipe, Texas Drummond III. 424
Leaves a little more acute than in
my specimens.

Wright 1849 № 679 is the
same thing — apparently in deep water,
weakly — floriid — leaves small,
narrow, lanceolate — hastate.



full size of upright leaf

Sagitt. falcata New Orleans Drummond
№ 376 is in Hooker herbar a mixture
3 sheets of S. heterophylla
and leaves which may belong to
falcata.

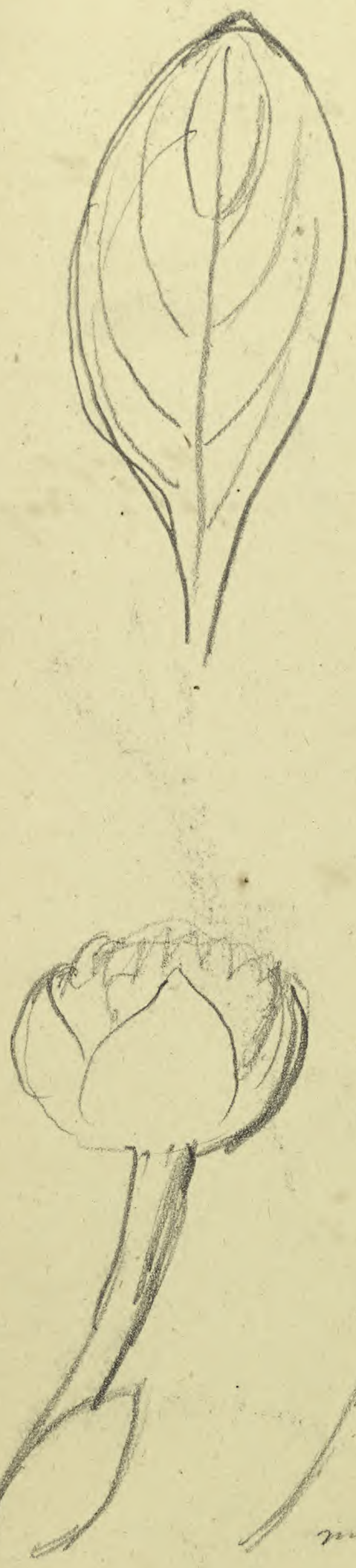
"Hb. Pursh proper." but without
Pursh's original label — but sheet
marked in pencil S. gracilis ? Willd
is a narrow leaved falcata

Demerara, leaves exactly like our
elegans, rigid, large feather veined —
scapes long laceolate,

Hort. coll. is the same thing.
apparently

S. Caroliniana Jamaica; leaves thinner
more ovate, petioles large — acute or
obtuse — 4-6 inches long — 1½-2 broad
scape 1½-2 feet high — female
Jamaica

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
Missouri Botanical Garden



pedicells slender, as long as males

This may be distinct from
S. canniphlis

Jamaica, Wilson: very large feather vein
leaf 10 inches long 5 broad, branched
scape — bracts lanceolate, female
pedicells shorter & stouter than male

Sag. rhombifolia Brongt Sellow. Hb.
has broader leaves, petiolate — veined Berl.
stout female pedicelly, ovoid pistillyx.
large lanceolate acuminate bracts

Gardners 2737 is perhaps the same
head of fruit 1 inch diameter

male Schomburgk, Guiana 756 seems
to be the same, with linear elongate
phyllodia!

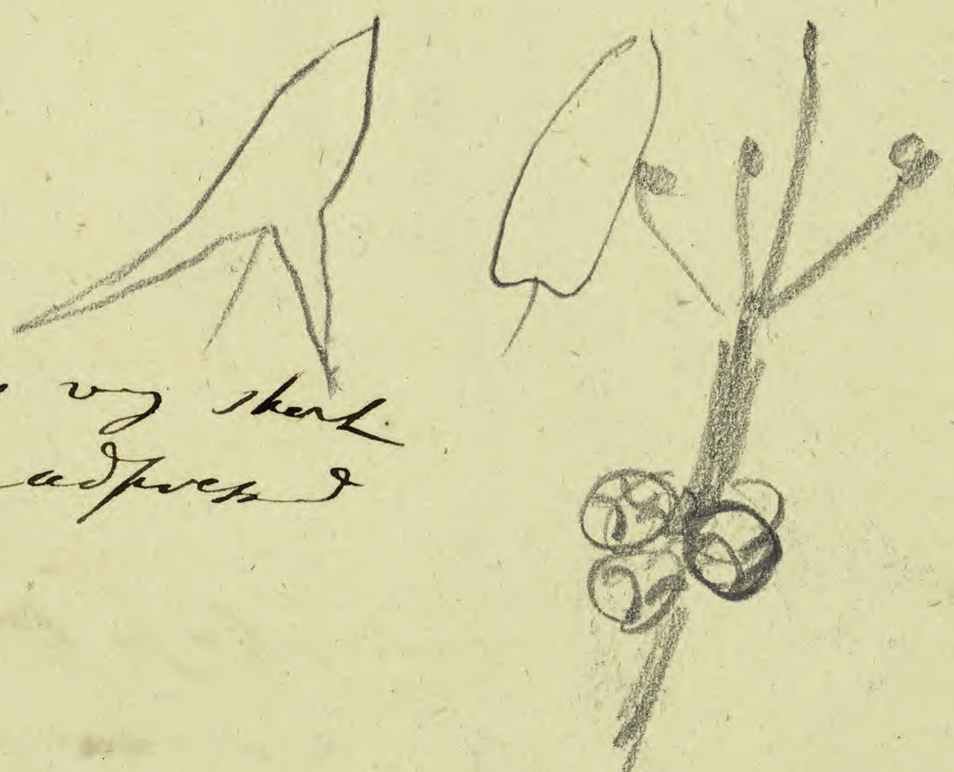
Gillies — Chile not very good
Gillies 763 specimens

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Sag. Guianensis HBK Hostman Surin 870

Large fistulous with spreading
not reflexed calyx;
short pedunculus

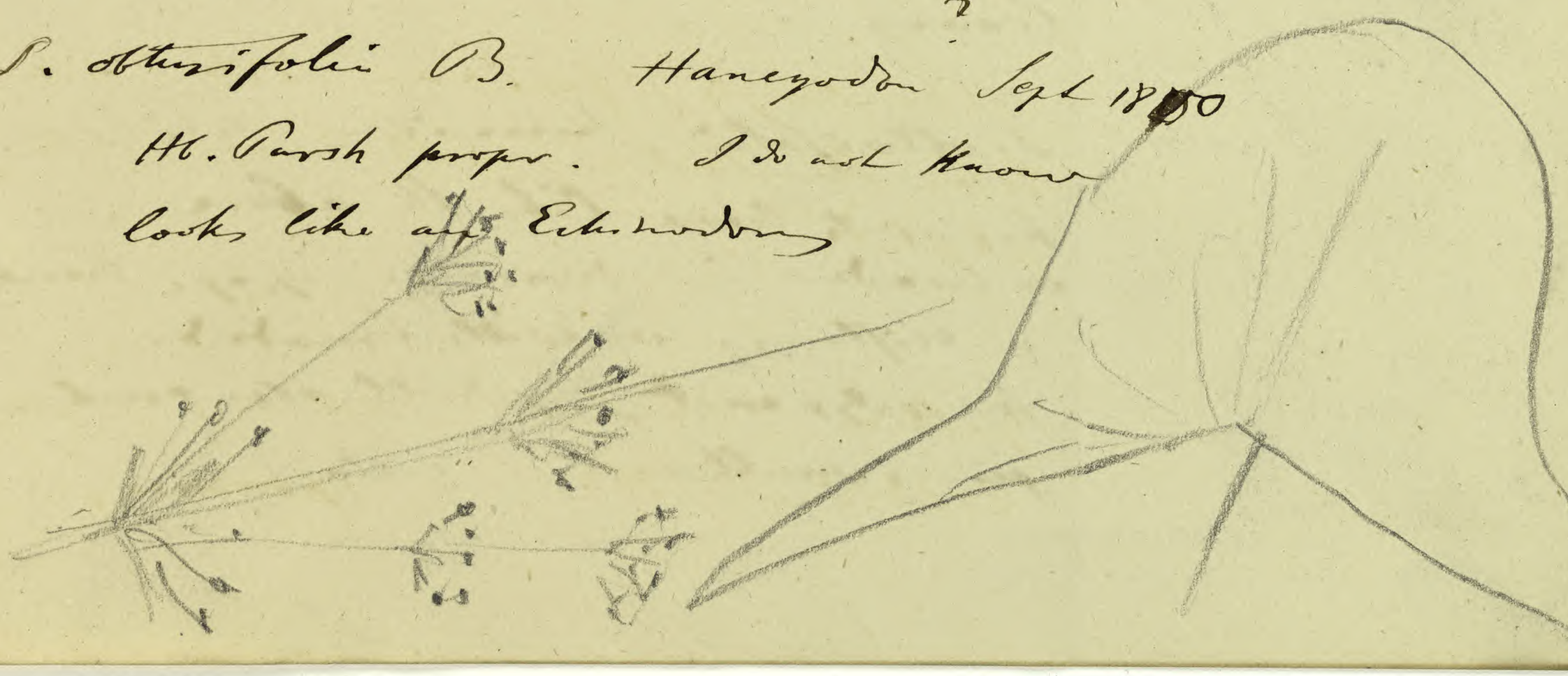
Gardner Brazil 2738
& 3118 are the same
Holton N Granada 128 also.
Seemann Panama 686



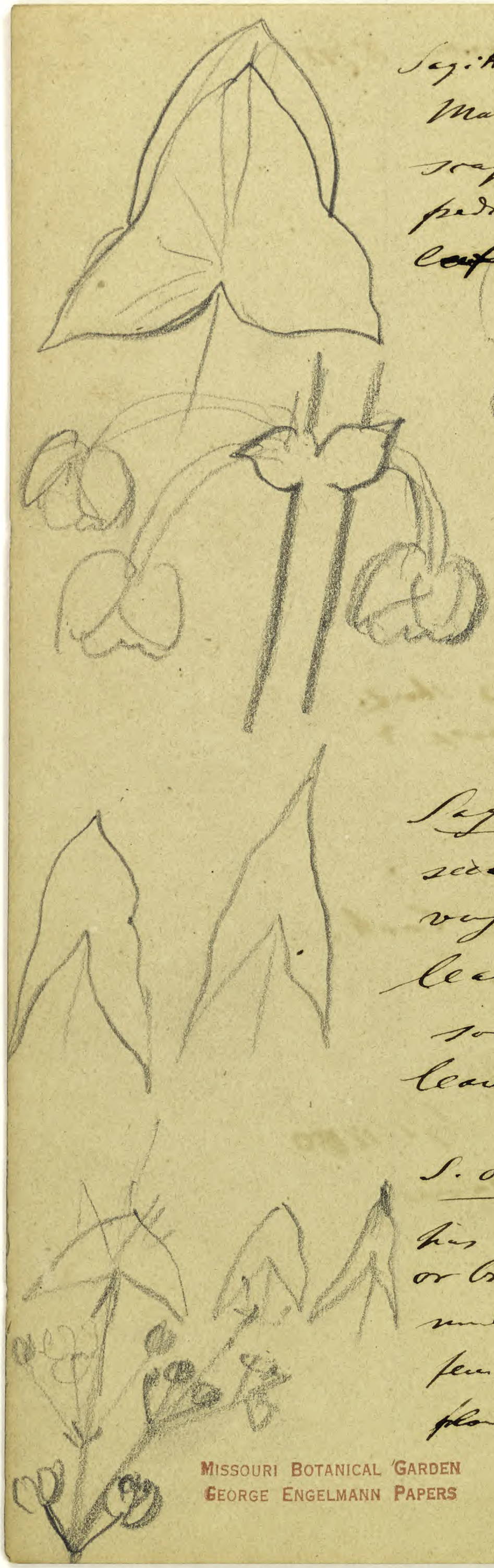
Rurdia, Lancea is distinct:
1-6 inches high, rarely
as large as leaves; fem. fertile very short
calyx spreading or sometimes adpressed
or erect.

New Granada Hollon, no Nos — looks
like S. Vaginalis

S. obtusifolia B. Hanenyodon Sept 1850 ?
Ht. Parish proper. I do not know
looks like any Echinodorus



0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN



Sagittaria Guyanensis HBK., Lima
Matthews 1831 — a very large plant
scape is rather thick succose; fem!
pedicells round, calyx adpressed
Corolla Large 6 inches long — —

Jameson, Lima
& Callao.
seems to be the same

Sag. montevidensis Cham & Schl Buenos Ayres
seems quite the same — often
very stout much branched stem, large
leaves — — often dioicous.
some smaller specimens, with smaller
leaves — ?

S. obtusifolia Jamaica Wilson
has acute leaves like the above.
or broader — dioicous; scape branchy
multifloras; pedicells crowded;
fem. calyx erect, pedicell also erect
flowers small — yellow ??

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Notes on Sagittaria

by Herb Mickum Paris 1857

Sagittaria sagittifolia two forms of S. variabilis

1, narrow lanceolate leaf with long & narrow lobes — a male and a female (Devil's Cape)

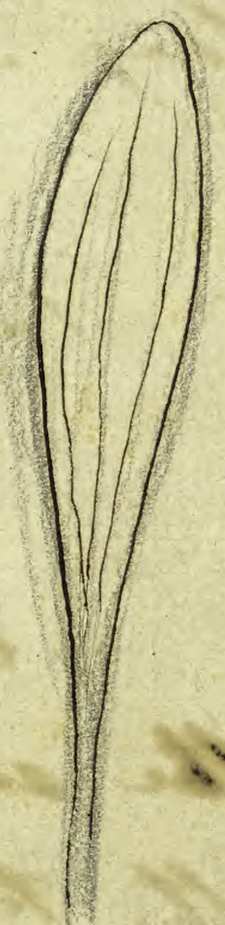
2, Ovate leaf with lanceolate lobes, male Cape.

Sagittaria natans, Carolina.

1, Specimen with submersible leaves — Cape

with 2 verticils developed, a third one yet covered by the bracts, only a single female flower, peduncle somewhat recurved

2, a specimen without flowers most leaves like those of the former, but one or two attenuate at base like petiole



10163

Sagittaria Cuneifolia " Carolina & Georgia

1 2 leaves without flowers, belonging both to S. falcata; one is large and of the usual size. 8–9 inches long etc; the other is 4 inches long and narrowly 1 inch wide, venation in both identical – the smaller one only 1 pair of nerves from the middle

2 a broad leaved form of S. simplex! [Flin]
leaf about 4 inches long, 1 ½ wide, and nerved from the base, of thin texture.
Only a small fragment of a scape with pedicels very slender over 1 inch long and with small flowers.

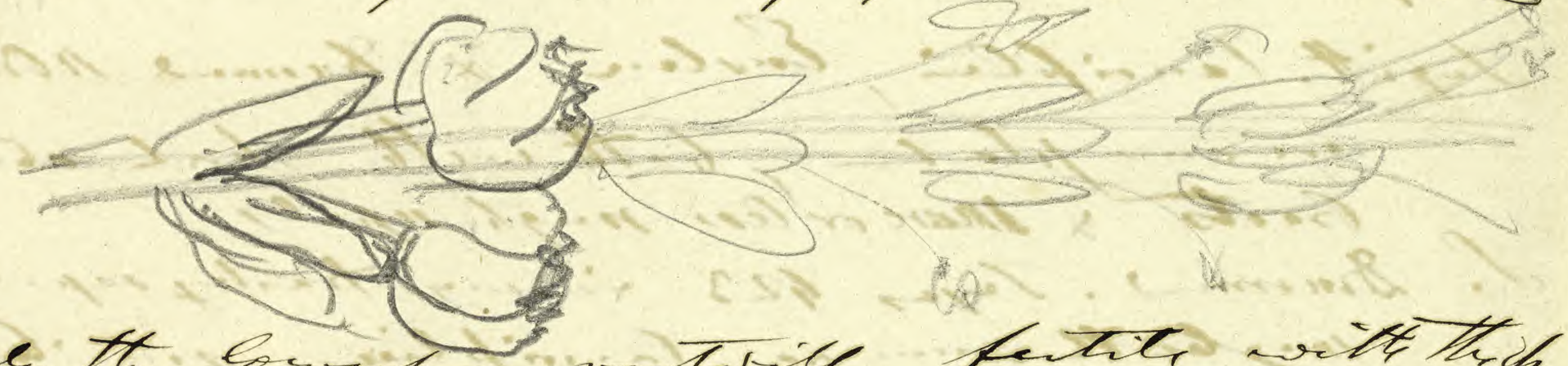
Sagittaria graminea

Hab in Canada " Coxe

3 leaves are mere phyllodia, evidently the same as the leaves of S. acutifolia; the two others are longer than the scape, and have regular leaves on slender petioles; leaves only narrower than these usually are

Sagittaria acutifolia Lin Schubert. Guiana

Schomburgk 1. 756. Phyllodia linearia



only the lowest verticill fertile with thick

pedicells, the others very slender, sterile

scape almost covered with bracts

punctiferous calyx erect — bracts & sepals

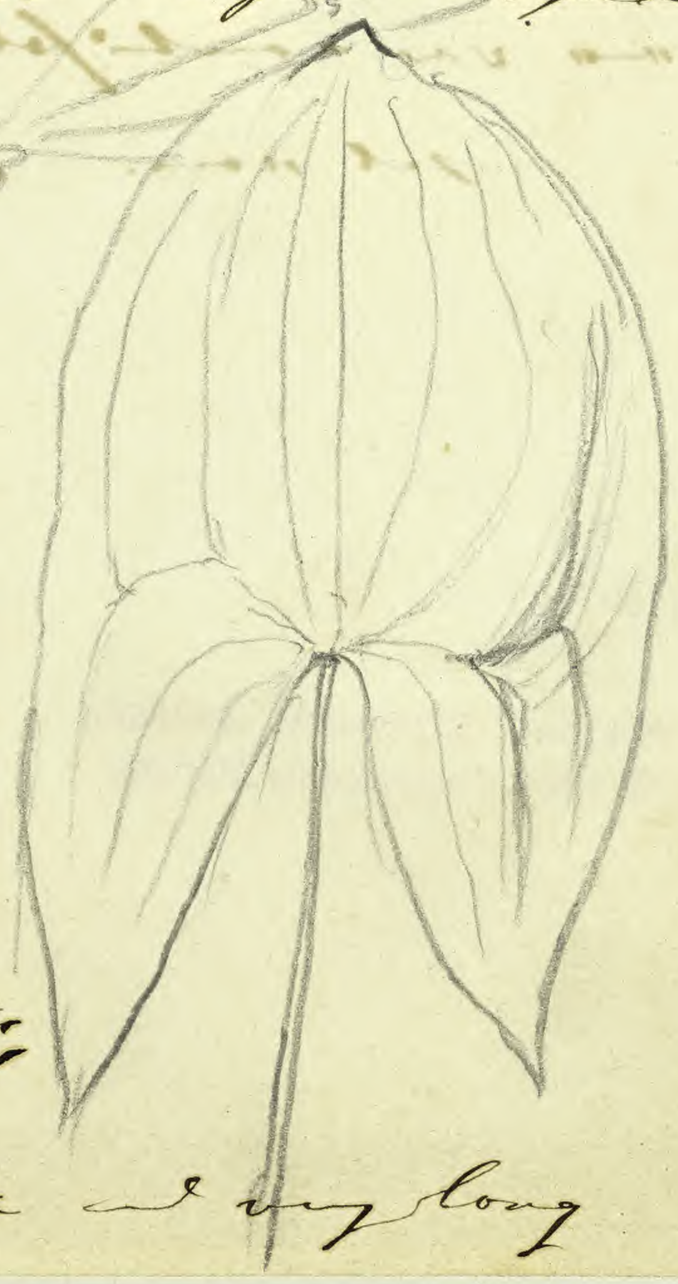
oblong obtuse

? Sellowiana Klk. Scub. Pohl. 4589 Vine foliis

scape simple or ramose; bracts lanceolate

acute, minute pedicells slender

? hotenophylla Punch Ensolea à pour spec.



with. Alabama

ex

Benthm.

scape et petioles

slender; pedicells slender

pendulous rarely stouter

but shorter; fl. small

bracts and sepals ovate obtuse,

sepals appendiculate (= unipunctate)

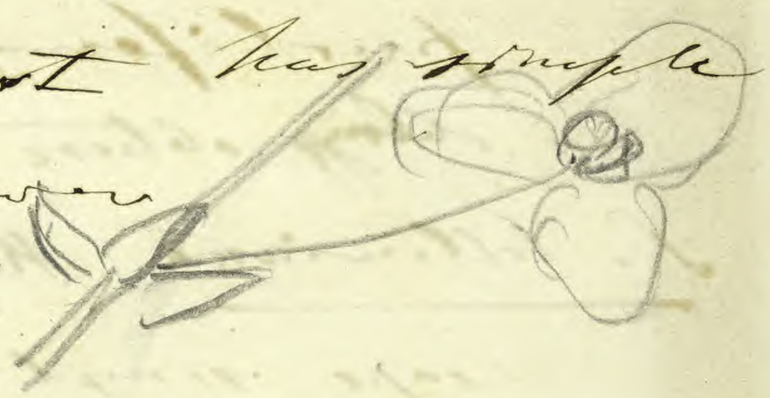
erect — style alate on ventral side and very long

only lowest ones sterile, one branch with male flowers in both sexes.

S. pitt. canaliculi, Enslen & Drumm NOrlns 376
are our plant, both with short obtuse rough
hairs & more or less rough sepals.

S. Drumm. Texas 423 is my tracky sepala which
may be the same as canaliculi, yet I am inclined
only narrow leaf, 1 foot long, but
stem panicled branched, & pedicells much
shorter —

S. canaliculi Lancaster Bart has stipule
stem acute smooth hairy
the same pubescent — foliage



S. graminea Mich Drumm Texas
Kentucky etc — NOrleans 375
forma latifolii

S. " var acutifolii Texas Drumm 435
pet nom. S. falcata Bethlehem Un. Herb 1832

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS
10164

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Sagittaria Herb Delessert Paris 1857

" S. graminea Mx " Chapm is Michaux plant, and long
Carpus, in all parts; phyllodia lanceolate, foliis paucis
linearis-lanceolatis! — I would take it for a large
form of S. simplex

S. ——— Ceylon, vertic illata
S —— upper scapes entire-thick; very single-
S —— Brasil, an Echinodorus.

S. — Guyane, leaves like a small Nymphaea
— fruit, pour mieux —
S. — Nil Blanc — with globose fruit.
S. Cayenne similar to Falcata, even
the venation

" S. pusilla nutt " North Chapm " is my
Echinodorus parvulus
S. sagittifolia Europe
S. obtusifolia. (Index 2)
S. heterophylla Pa pedicels 1 sagitt
S. graminea Pa 5 verticils
S. falcata Pa Un. itin (is acute =
S. Caroliniana " Sigmoid. Mich)
S. lancifolia, China, Hort Paris = falcata
apparently
S. pusilla Nutt no locality — a single
plant, unknown to me

S. Drumm 1833 Texas

Leaves narrowleaved form of S. simplex

S Drumm 1832 NO. No 375

is apparently the same, with the

narrower leaves

S. Am. sept Bost. Hb. Deutsch

a plat with very large broad obtuse sagittate

leaves and small female flowers.

S — Carolina Same as the

same — perhaps Schweinitz?

S. 754 Berlandier Mexico city.

looks like an overgrown simplex

S. nymphaecanpolia Hook.f. — Madagascar

same as the plant from Madagascar (Before)

S — Madagascar.

S — Calcutta (Wallich)

S Poiteau (Hb Vind.)

seems S. campolei Li

S. Mexico Andrieux

1833.

S. Oaxaca. Galeotti No 4891

perhaps = S. longiloba

S. Texas Drummond. 423. bulbosa

var. pumilata the original S. papillosa Buckley

Texas Drm 424 seems my

calycina

S. — Maryland 1839 ?
Contes foliorum !

S. Drummd 376 N Orleans.
= S. falcata foliis medüs (1" vidy)
S — — — — very large.
S. Brazos, Texas. Drummd. ?
S. Alabama Drummd
S. Pondicherry Perrottet
S. Brésil Gaudich ? very large
S. Jamaica ? vertic'llata
S. Buenos Ayres (= calycina ?)
S Buenos Ayres (vtis diffis !)
vertic'llata

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

10165

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Sagittaria of Herb General Desf

Paris 17

S. stolonifera Cham & Schl A. Gray ; fruit ellipse ; involucre

S. Herb. de Villars ; without flow

S. variabilis Ohio the broad leaved form

S. obtusifolia Lin Calcutta, Wallich and other

(specimens of

S. heterophylla Pennsylv correct!

a very narrow leaved form

S. sagittata Pennsylvan. Reading

= variabilis ? one specimen - fl. plen

S. sagittifolia Siberia, Ledeb — no doubt

different specimens with much smaller

flowers

S. alpina Willd — a floating plant of

Siberia — fl. and leaves petiole

fl. per. subsessil !

fol = S. sagittata, but narrower

& more stiffer

S. sagittifolia Europa

S. sag. Herb fol Peru petiol. fruit stiff

veruvi, ovali, ; sepala persistentia

S. sagittifolia Herb. de Villars

S. Brasil — very distinct

with small and floating

leaves

S. cordifolia Coromandel

S. lancifolia Domingo & Cajenne

leaves similar to sagittata

10166

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Sagittaria "latifolia"
Willd Var Philippi 855

Hb. Berlin
1857

= S. chilensis Cham & Schl
Foliis graminei
fide Buchenau in ed. mit
p. 43 (1868)

ovary & style
soon after
flowering

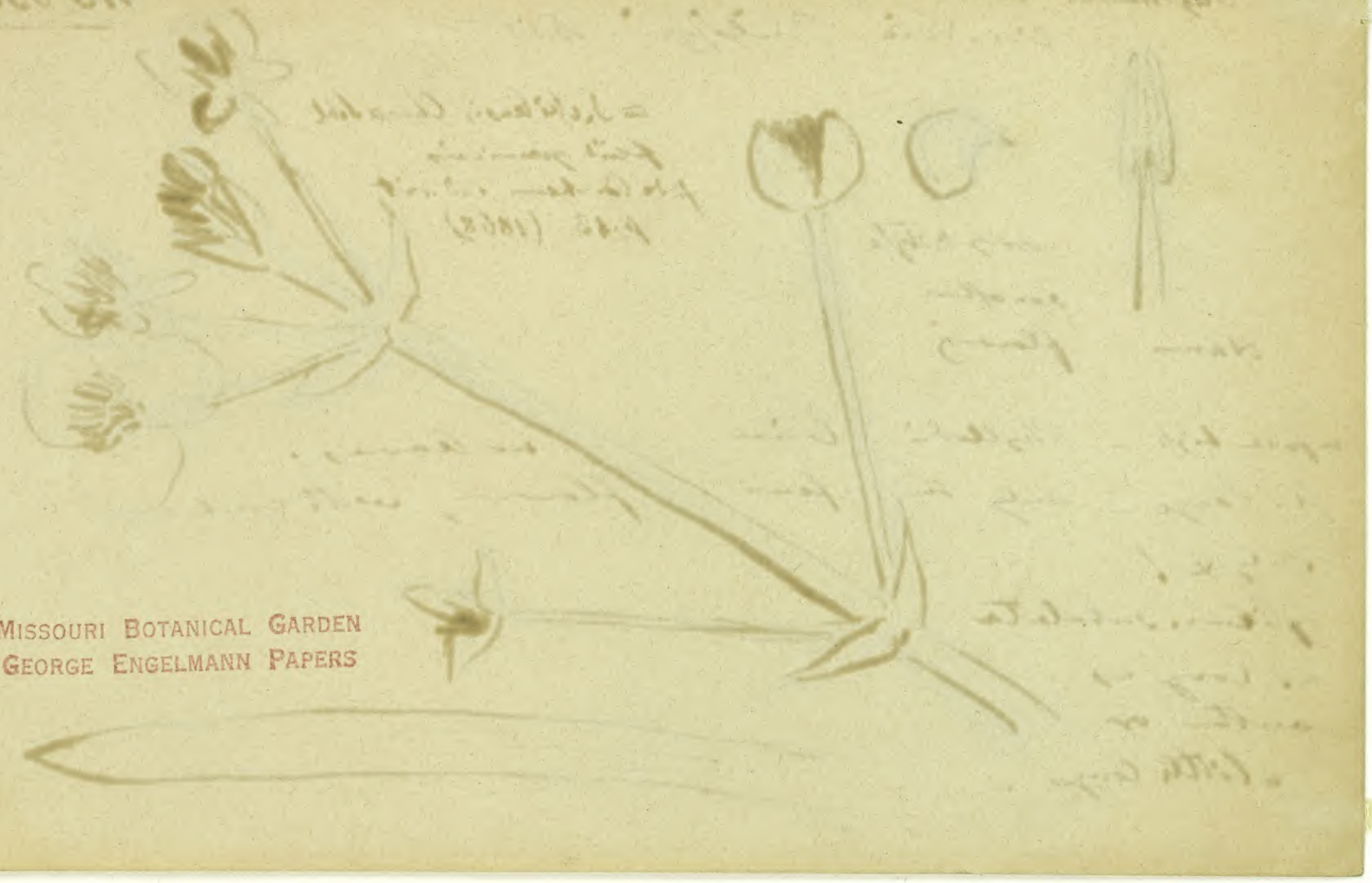
Stam

a foot high — Phyllodia linear
fl. large — only one
calyx!
filam. subulate
as long as
anther or
a little longer.

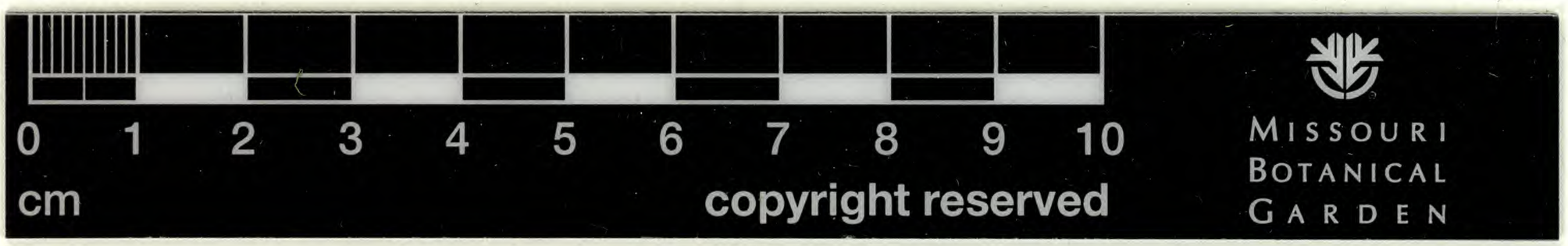
no leaves;
scape
flower, with erect

copyright reserved
MISSOURI BOTANICAL GARDEN

10167



MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



Pursh's Sagittaria

in Herb Hooker Aug 1857

Sagittaria simplex Pursh. a male and a female
scape — ~~also~~ not branched, belonging to a
Division simple form of Sagitt. variabilis
and a narrowly lanceolate leaf which

Rumex ? has a single midrib, and reticulated veins.
a Rumex
leaf ?
and therefore does not belong to any Sagittaria

Sag. latifolia latifolia β. Hooker subracemosa (Hk. Ic. Pl. 6th Ser)
The specimen has a very large obtuse leaf, and
simple scape, monoicous; it is the well known
broadleaved form of Sag. variabilis

Sagittaria obtusa Schuylkill. is the same thing
leaves smaller, but broad.

S. hastata
leaves broader or narrower, with wide or narrow
sinus
the common form of Sagitt variabilis
both scapes in the collection are entirely
female

over

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Sagittaria gracilis, Philad. 6th Str.

8910

the slender form of Sag. variabilis

Sag. heterophylla " Common "

is our plant

Sagittaria marked: Herb. Pursh proper. and in pencil: Sagittaria graminea ? Willd. "

" is a narrow leaved S. falcata; leaf 10 inches long, and 10 lines wide.

Sagittaria sagittifolia minor

and another specimen labeled "Onondoga"

Both are very similar,

Rocky Mountains

exactly like the former

whether they belong to

S. variabilis I am

at present unable to

say

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Alismaceae Hook. Aug. 1857

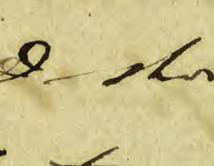
Sagittaria

S. sagittifolia Europe

S. alpina Siberia fol

leaves obtusely cuneate-hastate, rarely with long points — lowest (female) verticils almost sessile, upper (male) ones with long slender pedicells — leaves sometimes floating (var natans — Sag. natans Pallas)

S. Chinensis ? Moradabad, Dr Thomson



leaves broadly hastate, 4–6 inches wide female verticils; scape triangular or bracted; fem. pedicells somewhat shorter than male ped; & stouter.

S. chinensis China, Beechey — (no leaves) scape very slender, fem ped. very short. head of fruit large — male ped very slender flower small, & Chinensis is Sims in Bot. mag. t. 163 in Beechey Voyage p 220 where it is called S. sagittifolia

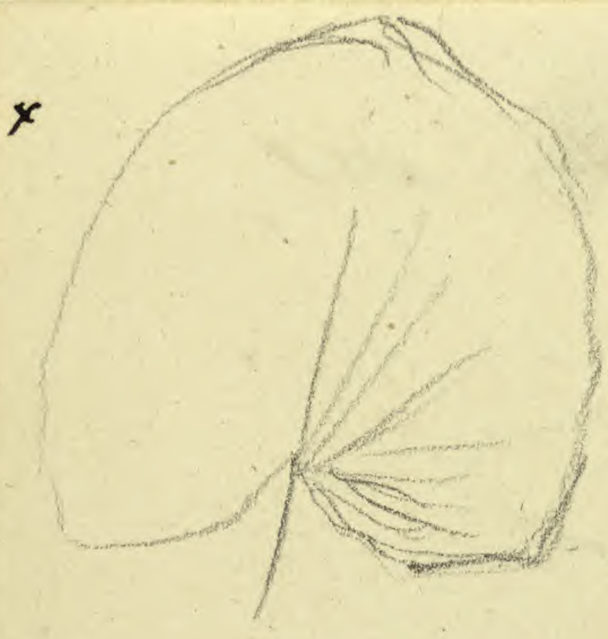
S. sagittifolia, Jacquemont, Kashmere

male & fem peduncles slender

(compare S. Sinensis, Japan, Wright 4)

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

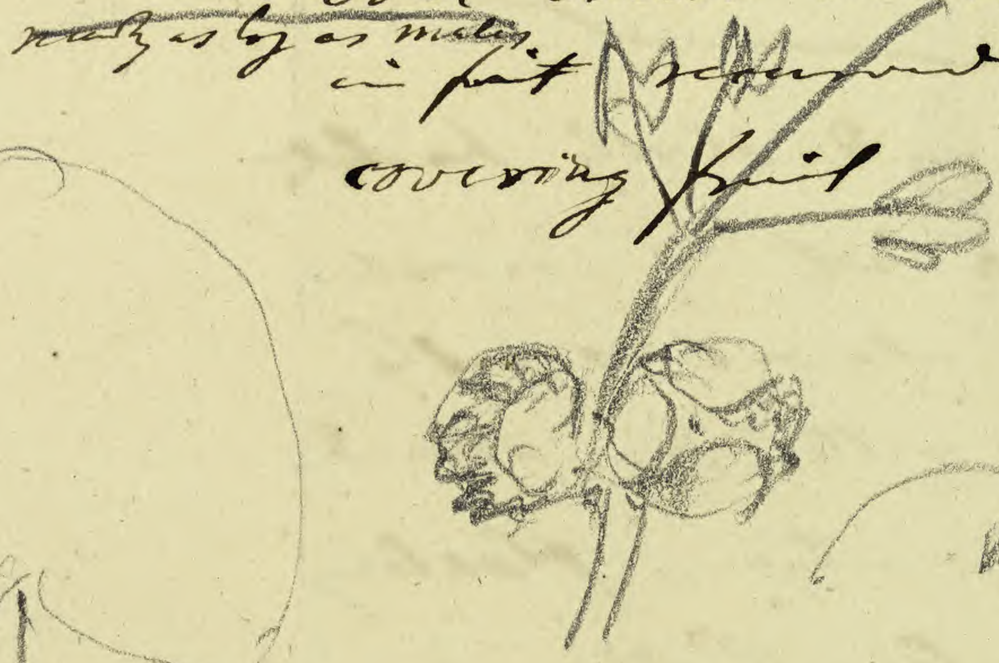
x

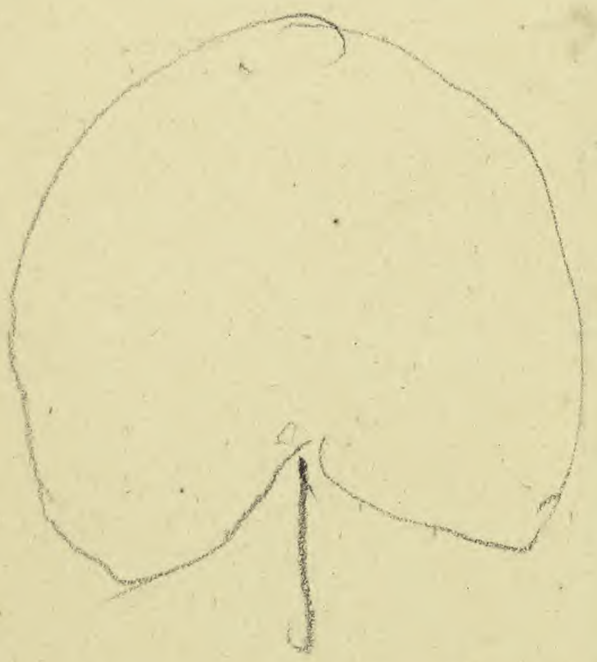


Sag. nymphaeae folia Roj. Madagascar

petioles & scapes slender floating, — leaves large; calyx covering fruit, ovary elongated, pedun. pet & C.ths shorter than male

Sag. cordifolia Rox6.? floating reniform leaves floating scapes (or at least reclining), large oval bracts obtuse, pedun. pedicels short of A





Sag. variabilis C ; pubescens Georgia

Dr Gray — & also from Schweinitz without locality — Leaves like the following for obtusa & latifolia, large, thickly pubescent, especially top of petiole

scape slender, mostly simple, pubescent, upper part, bracts and upper ½ densely pubescent

2, latifolia & Doria ; one is Pursh's own specimen labeled latifolia and another labeled obtusa. Other spec

from N Jersey, from St Louis (Drummond 120)
Alabama (Drummond 149) Kentucky

3. hastata Purshs own specimen.
with 2 simple female racemes, and some
many other localities, e.g. Sas Katchewan &
Alabama

4. longifolia, Bigel, Drummond,
Fraser, Carolina, N Jersey Torrey — a specimen
from Pursh labeled Sagitta. trifolia
Lin. Willd.
much longer than blade of leaf Lobes sometimes

5. gracilis Purshs own specimen
from Philadelphia — N Jersey from Torrey
under the name of S. Graminis Purshs
I think does not exist I — Boston —

Sagitta heterophylla Pursh, my plant!

Sag. graminea Mx (Colum S. simplex am. botanist)
Canada, N Jersey (acuta & acutifolia
N Orleans Drummond 375 San Felipe
Drummond (435) Lindheimer 183
(stolonifera E & Gr) St Louis Drum 683
N Orleans Drummond 377
a stouter broadleaved form is Lindheimer
No 713 713
still stouter ? Bigelovii, Drummond
also Louisiana, Short, under the name of S. acutifolia

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Hort Cantab. ed. 6. 246
fide Kunth III. 160

published 1798 in a Catalogue (one Decuria) – said to consist of 11 Species

[On what Authority this note?]

Sagitt. Bulbosa Don (where is the plant described ??) Linnheimer 182
Drummond 423

Drummond Alabama seems also to belong here – large famose taper but has a large sagittate leaf which I have never yet seen at their plant – still the texture seems to indicate that it really does belong here

On further Examination I find Schweinitz's and their Leaf which may not belong to the Cast we certainly does not belong to the former mixed under this label.

Whether the bulbosa comes from Alabama is doubtful

Missouri Botanical Garden
George Engelmann Papers

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
Missouri Botanical Garden